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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,813	06/26/2003	Young-Woo Lee	1293.1746	2773

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/603,813	Applicant(s) LEE ET AL.	
	Examiner Jorge L. Ortiz-Criado	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,8,10-16,18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7, 8, 10-16, 18 and 20-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Applicant is advised that should claims 3 and 7 be found allowable, claims 4 and 8 respectively, will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 3-5, 7, 8, 10-16, 18 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda et al. U.S. Patent No. 6,144,625.

Regarding claim 1, Kuroda et al. discloses an apparatus identifying a type of a disc (see Figs 1-2, 6; see col. 6, lines 25-67; col. 11, lines 9-11), comprising:

an RF (radio frequency) amplifier (7; 7a) amplifying light reflected by the disc;

an LPP signal detector (13) detecting an LPP (Land Pre-Pit) signal from output signals of the RF amplifier; and

a system controller (9) identifying a type of the disc according to whether the LPP signal is detected by the LPP signal detector

wherein the LPP signal detector (13) detects the LPP signal by slicing push-pull signals output from the RF amplifier (7, 7a) at a constant level (see col. 8, lines 6-29).

Regarding claims 3 and 4, Kuroda et al. discloses wherein the system controller (9) determines that the disc is a DVD(-)/ "R" type disc when the LPP signal is detected (see Fig. 6, step 25 "YES", step S23),

and that the disc is a DVD(+)/ "other" type disc when the LPP signal is not detected (see Fig. 6, step 25 "NO", step S17).

Regarding claim 5, Kuroda et al. discloses a method of discriminating a type of a disc, comprising: detecting an LPP signal from signals reproduced from the disc; and identifying a type of the disc according to whether the LPP signal is detected (col. 11, lines 9-59; Fig. 6)

wherein the detecting the LPP signal includes detecting the LPP signal by slicing push-pull signals at a constant level (see col. 8, lines 6-29).

Regarding claims 7 and 8, Kuroda et al. discloses wherein the identifying of the type of the disc includes determining that the disc is a DVD(-)/ "R" type disc when the LPP signal is detected (see Fig. 6, step 25 "YES", step S23),

and that the disc is a DVD(+)/ “other” type disc when the LPP signal is not detected (see Fig. 6, step 25 “NO”, step S17).

Regarding claim 10, Kuroda et al. discloses an apparatus identifying a disc type (see Figs 1-2, 6; see col. 6, lines 25-67; col. 11, lines 9-11), comprising:

an RF amplifier (7, 7a) that produces a push-pull signal from a light wave reproduced from a disc; and

an LPP signal detector (13) that detects a certain voltage level (reference value) in the push-pull signal (see col. 8, lines 6-29);

wherein if the certain voltage level is detected (see col. 8, lines 6-29) the disc is identified as a DVD(-)/ “R” type disc (see Fig. 6, step 25 “YES”, step S23) and if the certain voltage level is not detected the disc is identified as a DVD(+)/ “other” type disc (see Fig. 6, step 25 “NO”, step S17)

wherein the LPP detector (13) detects an LPP signal according to detection of the certain voltage level by slicing the push-pull signal at a constant level (see col. 8, lines 6-29).

Regarding claim 11, Kuroda et al. discloses wherein the LPP detector (13) detects an LPP in the push-pull signal by detection of the certain voltage level (see col. 8, lines 6-29).

Regarding claim 12, Kuroda et al. discloses a system controller (9) that controls a disc drive and identifies the disc type (Figs 1).

Regarding 13, Kuroda et al. discloses a servo controller that enables tracking and focusing (see col. 7, lines 45-59; col. 9, lines 18-24).

Regarding 14, Kuroda et al. discloses an optical detector (1) that detects the light wave reflected from the disc (see Fig. 1).

Regarding claim 15, Kuroda et al. discloses wherein the optical detector (1) comprises: a structure divided into four sections having a first photodiode, a second photodiode, a third photodiode, and a fourth photodiode (see Fig. 1).

Regarding claim 16, Kuroda et al. discloses wherein the RF amplifier (7, 7a) comprises: a current-to-voltage converter having a first amplifier, a second amplifier, a third amplifier, and a fourth amplifier, wherein the four amplifiers convert output signals from corresponding first through fourth photodiodes of the optical detector to voltage values (inherent to Kuroda et al.); and

a push-pull operator having a first adder (19), a second adder (20), and a subtracter (21), wherein the first adder adds output signals of the first amplifier and the second amplifier to produce a first added signal, the second adder adds output signals of the third amplifier and the fourth amplifier to produce a second added signal, and the subtracter adds the first added signal and the second added signal to produce the push-pull signal (see Fig 2, # 7a).

Regarding claim 18, Kuroda et al. discloses an optical detector (1) having a bi-sectional structure that includes a first photodiode (B1B4) and a second photodiode (B2B3) (see Fig 2).

Regarding claim 20, Kuroda et al. discloses a method of identifying a type of a disc immediately after controlling a tracking servo (col. 11, lines 9-59; Fig. 6), comprising: producing a push-pull signal (Spp) from a signal reproduced from the disc; detecting an LPP signal by slicing the push-pull signal (see col. 8, lines 6-29); wherein the disc is identified as a first DVD type/ "R" disc if the LPP signal is detected (see Fig. 6, step 25 "YES", step S23) and the disc is identified as a second DVD type / "other" disc if the LPP signal is not detected (see Fig. 6, step 25 "NO", step S17).

Regarding claim 21, Kuroda et al. discloses enabling tracking and focusing modes of a disc drive (see col. 7, lines 45-59; col. 9, lines 18-24).

Response to Arguments

Applicant's arguments filed 06/19/2006 have been fully considered but they are not persuasive.

Applicant argues that Kuroda et al. does not discuss "slicing" push pull signals from the RF amplifier.

The examiner cannot concur with the Applicant because Kuroda et al. in the portion provided by the examiner in the above rejections (see col. 8, lines 6-29), clearly discuss obtaining the LPP signal by "slicing" push-pull signals output from the RF amplifier.

Kuroda et al. from the regenerative amplifier 7 produce a push-pull error signal, the signal is supplied to the pre-pit signal detector 13 and the pre-pit signal detector 13 includes a

comparator adapted to compare the push-pull signal SPC with a predetermined reference value (usually called slicing a signal with a slice level), capable of extracting from the composite signal S PC a pulse signal generated due to pre-pits formed on the disc producing a pre-pit detection signal S PD, which is a two-value signal only indicating a high or low value (usually called as a sliced signal).

Kuroda et al. clearly and specifically provides such “slicing discussion” as outlined above. Applicant acknowledged this discussion in his remarks, but alleges that that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The examiner cannot find why Kuroda et al. does not perform such “slicing” as argued.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

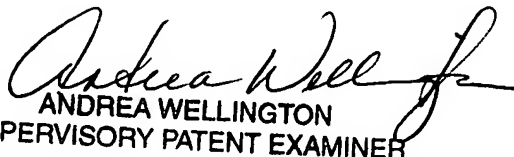
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(12:30 pm- 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER